

APPENDIX B

CLAIMS PENDING IN USSN 09/144,886 WITH ENTRY OF THIS AMENDMENT

1. An isolated single-chain antibody that specifically binds to an epitope specifically bound by an antibody expressed by a clone selected from the group consisting of clone S25, clone C25, clone C39, clone 1C6, and clone 1F3, wherein said antibody binds to and neutralizes botulinum neurotoxin type A (BoNT/A).
2. The antibody of claim 1, wherein said clone is S25.
3. The antibody of claim 1, wherein said clone is C25 or C39.
4. The antibody of claim 1, wherein said clone is 1C6.
5. The antibody of claim 1, wherein said clone is 1F3.
6. The antibody of claim 1, wherein said antibody comprises at least two variable heavy (VH) complementarity determining regions (CDRs) listed in Table 4 (nucleotides 31-35, 50-66, or 99-114 of any of SEQ ID NOS:51-74),
7. The antibody of claim 6, wherein said antibody comprises three variable heavy (VH) complementarity determining regions (CDRs) listed in Table 4 (nucleotides 31-35, 50-66, or 99-114 of any of SEQ ID NOS:51-74),
8. The antibody of claim 1, wherein said antibody further comprises a variable light (VL) complementarity determining region (CDR) listed in Table 4 (nucleotides 31-35, 50-66, or 99-114 of any of SEQ ID NOS:51-74, or nucleotides 24-33, 49-55, or 88-96 of any of SEQ ID NOS:75, 76, 78, 82, 83, 88, or 90, or nucleotides 24-35, 51-57, or 99-109 of any of SEQ ID NOS: 77, 79, 91, 96, 97, or 98, or nucleotides 24-38, 54-60, or 102-112 of any of SEQ ID NOS: 80, 81, 84-87, or 92-95).
9. The antibody of claim 8, wherein said antibody comprises at least two variable light (VL) complementarity determining regions (CDRs) listed in Table 4 (nucleotides 31-35, 50-66, or

99-114 of any of SEQ ID NOS:51-74, or nucleotides 24-33, 49-55, or 88-96 of any of SEQ ID NOS:75, 76, 78, 82, 83, 88, or 90, or nucleotides 24-35, 51-57, or 99-109 of any of SEQ ID NOS: 77, 79, 91, 96, 97, or 98, or nucleotides 24-38, 54-60, or 102-112 of any of SEQ ID NOS: 80, 81, 84-87, or 92-95).

10. The antibody of claim 9, wherein said antibody comprises three variable light (VL) complementarity determining regions (CDRs) listed in Table 4 (nucleotides 31-35, 50-66, or 99-114 of any of SEQ ID NOS:51-74, or nucleotides 24-33, 49-55, or 88-96 of any of SEQ ID NOS:75, 76, 78, 82, 83, 88, or 90, or nucleotides 24-35, 51-57, or 99-109 of any of SEQ ID NOS: 77, 79, 91, 96, 97, or 98, or nucleotides 24-38, 54-60, or 102-112 of any of SEQ ID NOS: 80, 81, 84-87, or 92-95).

11. The antibody of claim 1, wherein said antibody is an antibody expressed by a clone selected from the group consisting of a clone listed in Table 4.

12. The antibody of claim 1, wherein said antibody is a single chain Fv (scFv).

13. The antibody of claim 1, wherein said antibody is a Fab.

14. The antibody of claim 1, wherein said antibody is a (Fab')₂.

15. The antibody of claim 1, wherein said antibody is a (scFv')₂.

16. The antibody of claim 15, wherein said antibody is a fusion protein of two scFv fragments.

17. The antibody of claim 1, wherein said antibody comprises a framework region listed in Table 4 (nucleotides 1-30, 36-49, 67-98, or 115-125 of any of SEQ ID NOS:51-74, nucleotides 1-23, 34-48, 56-87, or 97-107 of any of SEQ ID NOS:75, 76, 78, 82, 83, 88, and 90, nucleotides 1-23, 36-50, 58-89, or 99-109 of any of SEQ ID NOS: 77, 79, 91, 96, 97, and 98, or nucleotides 1-23, 39-53, 61-92, or 102-112 of any of SEQ ID NOS: 80, 81, 84-87, and 92-95).

18. The antibody of claim 17, wherein said framework is a variable heavy (VH) framework region listed in Table 4 (nucleotides 1-30, 36-49, 67-98, or 115-125 of any of SEQ ID NOS:51-74).

19. The antibody of claim 17, wherein said framework is a variable light (VL) framework region listed in Table 4 (nucleotides 1-23, 34-48, 56-87, or 97-107 of any of SEQ ID NOS:75, 76, 78, 82, 83, 88, and 90, nucleotides 1-23, 36-50, 58-89, or 99-109 of any of SEQ ID NOS: 77, 79, 91, 96, 97, and 98, or nucleotides 1-23, 39-53, 61-92, or 102-112 of any of SEQ ID NOS: 80, 81, 84-87, and 92-95).

20. The antibody of claim 18, wherein said antibody comprises at least two variable heavy (VH) framework regions listed in Table 4 (nucleotides 1-30, 36-49, 67-98, or 115-125 of any of SEQ ID NOS:51-74).

21. The antibody of claim 19, wherein said antibody comprises at least two variable light (VL) framework regions listed in Table 4 (nucleotides 1-23, 34-48, 56-87, or 97-107 of any of SEQ ID NOS:75, 76, 78, 82, 83, 88, and 90, nucleotides 1-23, 36-50, 58-89, or 99-109 of any of SEQ ID NOS: 77, 79, 91, 96, 97, and 98, or nucleotides 1-23, 39-53, 61-92, or 102-112 of any of SEQ ID NOS: 80, 81, 84-87, and 92-95).

22. The antibody of claim 18, wherein said antibody comprises a variable heavy (VH) region listed in Table 4 (SEQ ID NOS:51-74).

23. The antibody of claim 19, wherein said antibody comprises a variable light (VL) region listed in Table 4 (SEQ ID NOS:75-98).

24. (Once amended) An isolated single chain anti-botulinum neurotoxin type A (anti-BoNT/A) antibody, said antibody comprising a variable heavy (VH) complementarity determining region (CDR) listed in Table 4 (nucleotides 31-35, 50-66, or 99-114 of any of SEQ ID NOS:51-74), and wherein said antibody specifically binds to and neutralizes a botulinum neurotoxin type A.

25. The antibody of claim 24, wherein said antibody comprises at least two variable heavy (VH) complementarity determining regions (CDRs) listed in Table 4 (nucleotides 31-35, 50-66, or 99-114 of any of SEQ ID NOS:51-74).

26. The antibody of claim 25, wherein said antibody comprises at three variable heavy (VH) complementarity determining regions (CDRs) listed in Table 4 (nucleotides 31-35, 50-66, or 99-114 of any of SEQ ID NOS:51-74).

27. The antibody of claim 24, wherein said antibody further comprises a variable light (VL) complementarity determining region (CDR) listed in Table 4 (nucleotides 31-35, 50-66, or 99-114 of any of SEQ ID NOS:51-74, or nucleotides 24-33, 49-55, or 88-96 of any of SEQ ID NOS:75, 76, 78, 82, 83, 88, or 90, or nucleotides 24-35, 51-57, or 99-109 of any of SEQ ID NOS: 77, 79, 91, 96, 97, or 98, or nucleotides 24-38, 54-60, or 102-112 of any of SEQ ID NOS: 80, 81, 84-87, or 92-95).

28. The antibody of claim 27, wherein said antibody comprises at least two variable light (VL) complementarity determining regions (CDRs) listed in Table 4 (nucleotides 31-35, 50-66, or 99-114 of any of SEQ ID NOS:51-74, or nucleotides 24-33, 49-55, or 88-96 of any of SEQ ID NOS:75, 76, 78, 82, 83, 88, or 90, or nucleotides 24-35, 51-57, or 99-109 of any of SEQ ID NOS: 77, 79, 91, 96, 97, or 98, or nucleotides 24-38, 54-60, or 102-112 of any of SEQ ID NOS: 80, 81, 84-87, or 92-95).

29. The antibody of claim 28, wherein said antibody comprises three variable light (VL) complementarity determining regions (CDRs) listed in Table 4 (nucleotides 31-35, 50-66, or 99-114 of any of SEQ ID NOS:51-74, or nucleotides 24-33, 49-55, or 88-96 of any of SEQ ID NOS:75, 76, 78, 82, 83, 88, or 90, or nucleotides 24-35, 51-57, or 99-109 of any of SEQ ID NOS: 77, 79, 91, 96, 97, or 98, or nucleotides 24-38, 54-60, or 102-112 of any of SEQ ID NOS: 80, 81, 84-87, or 92-95).

30. The antibody of claim 24, wherein said antibody is an antibody expressed by a clone selected from the group consisting of a clone listed in Table 4.

31. The antibody of claim 24, wherein said antibody is a single chain Fv (scFv).
32. The antibody of claim 24, wherein said antibody is a Fab.
33. The antibody of claim 24, wherein said antibody is a (Fab')₂.
34. The antibody of claim 24, wherein said antibody is a (scFv')₂.
35. The antibody of claim 34, wherein said antibody is a fusion protein of two scFv fragments.
36. The antibody of claim 24, wherein said antibody comprises a framework region listed in Table 4 (nucleotides 1-30, 36-49, 67-98, or 115-125 of any of SEQ ID NOS:51-74, nucleotides 1-23, 34-48, 56-87, or 97-107 of any of SEQ ID NOS:75, 76, 78, 82, 83, 88, and 90, nucleotides 1-23, 36-50, 58-89, or 99-109 of any of SEQ ID NOS: 77, 79, 91, 96, 97, and 98, or nucleotides 1-23, 39-53, 61-92, or 102-112 of any of SEQ ID NOS: 80, 81, 84-87, and 92-95).
37. The antibody of claim 36, wherein said framework is a variable heavy (VH) framework region listed in Table 4 (nucleotides 1-30, 36-49, 67-98, or 115-125 of any of SEQ ID NOS:51-74).
38. The antibody of claim 36, wherein said framework is a variable light (VL) framework region listed in Table 4 (nucleotides 1-23, 34-48, 56-87, or 97-107 of any of SEQ ID NOS:75, 76, 78, 82, 83, 88, or 90, nucleotides 1-23, 36-50, 58-89, or 99-109 of any of SEQ ID NOS: 77, 79, 91, 96, 97, or 98, nucleotides 1-23, 39-53, 61-92, or 102-112 of any or SEQ ID NOS: 80, 81, 84-87, or 92-95).
39. The antibody of claim 37, wherein said antibody comprises at least two variable heavy (VH) framework regions listed in Table 4 (nucleotides 1-30, 36-49, 67-98, or 115-125 of any of SEQ ID NOS:51-74).
40. The antibody of claim 38, wherein said antibody comprises at least two variable light (VL) framework regions listed in Table 4 (nucleotides 1-23, 34-48, 56-87, or 97-107 of any of SEQ ID NOS:75, 76, 78, 82, 83, 88, or 90, nucleotides 1-23, 36-50, 58-89, or 99-109 of any of SEQ ID NOS: 77, 79, 91, 96, 97, or 98, nucleotides 1-23, 39-53, 61-92, or 102-112 of any or SEQ ID NOS: 80, 81, 84-87, or 92-95).

NOS:: 77, 79, 91, 96, 97, or 98, nucleotides 1-23, 39-53, 61-92, or 102-112 of any or SEQ ID NOS: 80, 81, 84-87, or 92-95).

41. The antibody of claim 37, wherein said antibody comprises a variable heavy (VH) region listed in Table 4 (SEQ ID NOS:51-74).

42. The antibody of claim 38, wherein said antibody comprises a variable light (VL) region listed in Table 4 (SEQ ID NOS:75-98).

43. The antibody of claim 24, wherein antibody specifically binds to an epitope specifically bound by an antibody expressed by a clone selected from the group consisting of clone S25, clone C25, clone C39, clone 1C6, and clone 1F3.

44. The antibody of claim 1, wherein said antibody comprises a variable heavy (VH) complementarity determining region (CDR) listed in Table 4 (nucleotides 31-35, 50-66, or 99-114 of any one of SEQ ID NOS:51-74).